J. Adelaide Bot. Gard. 6(1): 67-71 (1982)

A NEW SUBSPECIES OF *BRACHYLOMA ERICOIDES* (SCHLTDL.) SOND. (EPACRIDACEAE) FROM SOUTH AUSTRALIA

R. Bates

38 Portmarnock Street, Fairview Park, South Australia 5126.

Abstract

Brachyloma ericoides (Schltdl.) Sond. is neotypified. *B. ericoides* subsp. *bicolor*, subsp. nov., is described and illustrated from Kangaroo Island, South Australia and compared with subsp. *ericoides*.

Introduction

While visiting Kangaroo Island in October 1978 the author observed that the plants of *Brachyloma ericoides*, widespread and locally common on the island, were markedly distinct from the mainland form, particularly in flower colour. The contrasting pale green corolla tube and orange lobes of the insular plants make them easily distinguishable from the mainland plants with their uniformly pink flowers.

The existence of two forms had been recognised for some time (I. Jackson, pers. comm.). Eichler (1965) discussed the difference in flower colour and filament shape and suggested that two distinct taxa were involved but he wanted to investigate the problem further before describing them. Investigations by the present author have revealed further differences in leaf length and shape of flower (see Table 1) and all of these are the basis for the division of *B. ericoides* into two subspecies.

Brachyloma ericoides (Schltdl.) Sond., Linnaea 26: 247 (1853); F. Muell., Fragm. Phyt. Aust. 4: 98 (1864); F. Muell., Fragm. Phyt. Aust. 6: 39 (1868); Benth., Fl. Aust. 5: 172 (1870); Black, Fl. S. Aust. ed. 2 (3): 674 (1952); Eichler, Suppl. Black's Fl. S. Aust. 256 (1965); Jackson, Kangaroo Island Wildfl. (1975); Cochrane et al., Flowers & Plants Vict. t. 82, col. (1968); Willis, Handb. Pl. Vict. 2: 512 (1973).

Basionym: *Lobopogon ericoides* Schltdl., Linnaea 20: 620 (1847).

Type citation: "Auf kalkig-sandigem Boden, (sandplaine) bei Bethanien. August".

Type material: *H.H. Behr s.n.*, Bethany, South Australia. The holotype has been destroyed (Eichler, 1965 and pers. comm., 1981); a neotype is selected here from material collected from near the type locality, because no other type material could be located.

Neotypus: *R. Bates 958*, 27.v.1981, sandy scrubland 6 km south-west of Bethany (34° 34′ S 138° 50′ E) Barossa Valley, Southern Lofty region, South Australia (AD98126244) iso.: B, BM, CANB, GOET, K, MELB, NSW).

Description

Woody, perennial shrubs 20-90 cm high with sparsely pubescent branches. *Leaves* shortly petiolate, linear-lanceolate, (3-) 5-16 (-18) mm long, 1-2 mm broad, tapering into a fine, pungent mucro, flat or slightly convex above, glabrous except for sparsely ciliolate margins, paler and striated below. *Flowers*, solitary, axillary; stalk (peduncle and pedicel) 1-2 mm long; bracts and bracteoles 3-7, up to 3 mm long. *Sepals* 4 or 5, (2-) 3-4 (-5) mm long almost scarious like the bracteoles. *Corolla* 6-8 mm long, tubular, glabrous outside, much inflated at first then constricted below the 5 obtuse, imbricate

2-3 mm long lobes which are papillose and have a pad of fleshy tissue covered with reflexed hairs just below their base inside the corolla tube. *Filaments* fleshy 0.4-2.0 mm long, inserted at summit of tube; anthers obtuse, attached near the top and somewhat cohering to form a ring. *Ovary* 5-6 celled; style 2-3 mm long which is long for the genus; stigma 5 lobed. *Fruit* drupaceous; stone globular with 5 major ribs and 5 minor ribs/ridges between them, woody 3.5-5 mm in diameter.

Distribution and ecology

B. ericoides is distributed widely from the Barossa Valley in the Northern Lofty, through the Southern Lofty, Murray and South-East regions and on Kangaroo Island in South Australia. It occurs also in western Victoria and is uncommon in south-western New South Wales. It is generally encountered in light sandy forest or calcareous mallee.

Plants flower at any time during the year depending on rainfall. The main flowering period is from July to September or later in cooler, damper districts. Mature fruits and flowers are commonly found together on the same plant. Emus eat the fruits and the partial digestion of the woody seed capsule probably aids in germination of the seeds.

Notes

B. ericoides has close affinities with the Western Australian species *B. concolor* F. Muell. and *B. preissii* Sond. These three species make up Bentham's section *Lobopogon*, with coloured flowers subtended by several bracts, corolla tubes much inflated and with obtuse corolla lobes. The other species of *Brachyloma* which are restricted to the eastern States and South Australia have white flowers subtended only by two bracteoles, with hardly inflated corolla tubes and with corolla lobes acuminate. These constitute Bentham's section *Lissanthoides*.

Table 1. Characters by which *Brachyloma ericoides* subsp. *ericoides* and subsp. *bicolor* differ.

	subsp. ericoides	subsp. bicolor
Leaf length	5-12 mm	10-16 mm
Colour of corolla tube, bracteoles and sepals	pink	pale green
Colour of corolla lobes	pink to reddish	bright orange-yellow
Inflated base of corolla lobes	rounded	angular
Anther filaments	1.4-2 mm long, broad ovate to obovate, appressed inside corolla, easily seen below anthers.	< 1 mm long, narrow ovate, emerging at right angles to corolla, so short as to be hidden by anthers.

subsp. **ericoides**

Lobopogon ericoides Schltdl., Linnaea 20: 620 (1847).

Brachyloma ericoides (Schltdl.) Sond., Linnaea 26: 247 (1853).

Stenanthera ericoides (Schltdl.) F. Muell., Fragm. Phyt. Aust. 4: 98 (1864).

Cyathodes ericoides F. Muell., Fragm. Phyt. Aust. 4: 98 (1864) nom. nud.

Styphelia lobopogona F. Muell., Fragm. Phyt. Aust. 6: 39 (1868), nom. illeg.

Type: as for *L. ericoides* Schltdl.

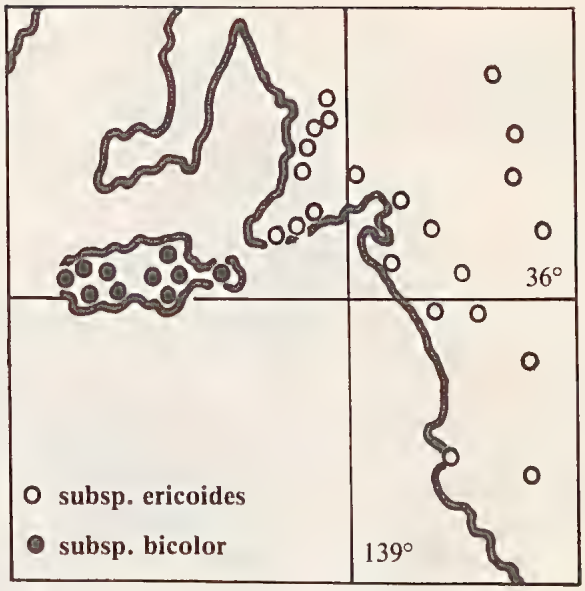
Compact shrubs 30-50 cm high or drawn up by surrounding vegetation into straggly shrubs to 90 cm. *Leaves* (3-) 5-12 (-14) mm long. *Flower* stalks 1-2 mm long; bracts 3-7. *Sepals* pink. *Corolla* 6-7 mm long; tube constricted immediately below the lobes and inflated from near the middle to the base, wholly pink; lobes 2.5-3.0 mm long, their bases rounded. *Filaments* 1.4-2.0 mm long, broad, ovate to obovate, appressed to the corolla and easily seen below the anthers in the dissected (fresh) flower; style c. 2.5 mm long.

This subspecies is restricted to the mainland, occurring from about Adelaide in the west, into western Victoria and the south-west of New South Wales, generally in sandy soil or with limestone. (Map 1).

Specimens examined at AD

VICTORIA: *A.C. Beauglehole 30837*, 25.iv.1969, Grampians; *A.C. Beauglehole 28745*, 1.x.1968, Wyperfield.

SOUTH AUSTRALIA: *H.M. Cooper s.n.*, May, 1941, Nangkita; *J.B. Cleland s.n.*, 8.xi.1958 Coorong; *Hj. Eichler 16378*, 14.xi.1959, Nuriootpa; *D. Hunt 2048*, 27.vi.1964, Kingston, S.E.; *E.H. Ising s.n.*, 16.viii.1957, Waitpinga; *D. Kraehenbuehl 302*, 21.v.1961, Milang; *M.C. Sharrad 7*, 8.viii.1959, Yumali; *A.G. Spooner 801*, 15.vi.1970, Billiat Conservation Park; *A.G. Spooner 1535*, 11.ix.1971, Monarto South; *B. Warren 16*, 17.v.1969, Peebinga in dunes; *R.M. Welbourne 179*, 31.v.1964, Hundred of Spence near Naracoorte, *D.J.E. Whibley 1415*, 7.vii.1964, Golden Grove; *P.G. Wilson 1938*, 24.viii.1961, near Keith.



Map 1. Distribution of *Brachyloma ericoides* in South Australia.

subsp. **bicolor** R. Bates, subsp. nov.

A subspecies typica foliis longioribus, tubo corollae bracteolisque pallide viridibus, lobis corollae laete aurantiacis, basibus inflatis acutius angulatis, filamentisque ovatis brevissimis et infra antheris differt.

Holotypus: *G. Jackson 1198*, 7.viii.1979, Kingscote Estate (35° 56′ S, 137° 52′ E) Kangaroo Island, South Australia (AD98153239), iso.: BM, CANB.

Shrubs 20-60 cm high, usually erect but occasionally procumbent in deeply shaded areas. *Leaves* (6-) 10-16 (-18) mm long. *Flower* stalks c. 1 mm long, bracts 4-6. *Sepals* pale green. *Corolla* 6-8 mm long; the tube constricted immediately below the lobes and inflated over 2/3 of the lower half, pale green and translucent; the lobes 2-3 mm long, with acute angle at their base, orange. *Filaments* less than 1 mm long, narrow, ovate, hidden by the anthers; style 2.5-3 mm long. (Fig. 1).

This subspecies appears restricted to Kangaroo Island where it is widespread in sandy soils or on limestone. I. Jackson (pers. comm. 1979) notes that the ripe fruits are edible and those of the typical subspecies were also found to be palatable. The fruits of the species are spherical when fresh but become more or less ridged when dry. (Map 1).

Specimens examined at AD

SOUTH AUSTRALIA: *R. Bates 472*, 9.viii.1978, Rocky River, Flinders Chase; *J.B. Cleland s.n.*, 26.ix.1964, Flinders Chase; *J.B. Cleland s.n.*, 27.x.1967, Cape de Couedic Road; *H.M. Cooper s.n.*, viii.1964, Pennington Bay; *Hj. Eichler 15494*, 14.xi.1958, Kelly Hill; *Hj. Eichler 15508*, 15.xi.1958, Flinders Chase; *E.H. Ising s.n.*, 30.xii.1922, MacGillivray; *G. Jackson 226*, 2.x.1962, Amen Corner; *G. Jackson 306*, 29.x.1963, Templetonia Reserve; *G. Jackson 617*, 15.vi.1969, Dudley Peninsula; *M.E. Phillips s.n.*, sub. CANB 01422, 30.viii.1964, D'Estree Bay (this specimen has the label '*B. halmaturinum* Eichl. m.s.' attached).

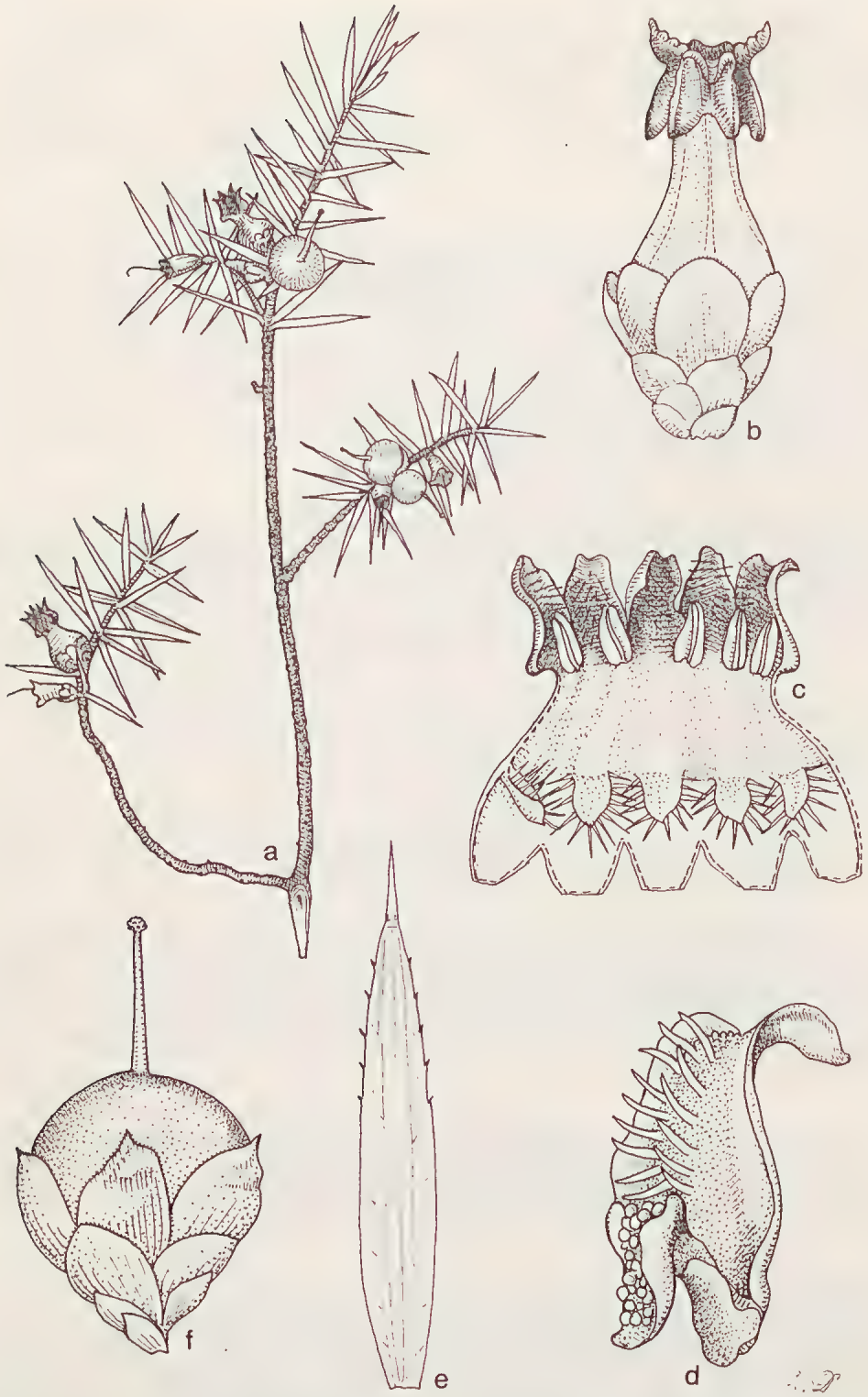


Fig. 1. *Brachyloma ericoides* subsp. *bicolor*, a, plant, X 2; b, flower, X 10; c, opened corolla showing inside, X 10; d, attachment of anther to corolla, X 45; e, leaf, X 6; f, fruit, X 12 (*I. Jackson 1198*, near Kingscote).

Acknowledgements

I am grateful to Ida Jackson (Mrs G. Jackson), who provided the material from which *B. ericoides* subsp. *bicolor* was illustrated and to the staff of the State Herbarium, Botanic Gardens, Adelaide, particularly Mr L. Dutkiewicz for preparing the illustration and Dr W. Barker for the Latin diagnosis. Dr Hj. Eichler, Canberra, A.C.T. suggested that *B. ericoides* be neotypified in this paper.

References

Bentham, G. (1870). "Flora Australiensis". Vol. 5. (Reeve: London).
Black, J.M. (1952). "Flora of South Australia" 2nd edn vol. 3 (Government Printer: Adelaide).
Cochrane, G.R., Fuhrer, B.A., Rotherham, E.R. and Willis, J.H. (1968). "Flowers and Plants of Victoria". (Reed: Sydney).
Eichler, Hj. (1965). "Supplement to J.M. Black's Flora of South Australia". (Government Printer: Adelaide).
Jackson, Ida (1975). "Kangaroo Island Wildflowers". (Islander Newspapers: Kingscote).
Mueller, F. (1864). "Fragmenta Phytographiae Australiae". Vol. 4. (Government Printer: Melbourne).
Mueller, F. (1868). ibid. Vol. 6. (Government Printer: Melbourne).
Schlechtendal, D. (1847). Bestimmung und Beschreibung der von Dr Behr in Süd-Australien gesammelten Pflanzen, *Linnaea* 20: 620.
Sonder, O.W. (1853). Plantae Muelleriana, *Linnaea* 26: 247.
Willis, J.H. (1972). "A Handbook to Plants in Victoria", Vol. 2. (Melbourne Univ. Press: Carlton).